

## REMARKS

Claims 13, 14, and 26-36 are pending in this application. Applicants acknowledge with appreciation the indication that Claims 13 and 14 are allowable over the art of record.

Claims 26 to 36 stand rejected under 35 U.S.C. § 103 as obvious over Shiozaki et al., U.S. Patent No. 4,366,093 ("Shiozaki") in view of Eichhorn et al., U.S. Patent No. 4,740,644 ("Eichhorn"). Applicants respectfully traverse this rejection. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

MPEP, 706.02(j) (emphasis added). Applicants respectfully submit that the cited art, in any proper combination, fails to meet these requirements.

Shiozaki teaches the potential use of *pellets* as catalyst supports for fixed bed processes and reactions, where the pellets are in the shape of hollow cylinders 3 to 6 mm. in outer diameter and length (*see* Abstract). Eichhorn describes the preparation of 1,2-dichloroethane by oxychlorination of ethylene over a copper-containing catalyst. Eichhorn teaches that the catalyst is impregnated "on a conventional carrier" (col. 3, lines 33-34). The examples in Eichhorn are performed with annular pellets having a height and external diameter of 5 mm (*see* col.2, lines 51-2).

The method recited in claims 26 to 36, unlike that described in the cited references, employs *metallic monolithic* catalyst supports having channels the walls of which are adapted to receive a catalytically active phase for selective gas phase reaction in tubular reactors. Indeed, the present invention's disclosure describes the inherent problems with methods that rely on *pellets* as catalyst supports in fixed bed processes. These problems include large pressure drops across the reactors and hot spots in the catalytic bed. The present invention unexpectedly and surprisingly alleviates these problems through the use of *metallic monoliths* as catalyst supports rather than *pellets*.

Neither Shiozaki nor Eichhorn, individually or when combined, teach or suggest the use of *metallic monolithic* catalyst supports for fixed bed processes, or suggest the advantages that may flow therefrom. Advantages that flow from the use of metallic monoliths in the

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claimed methods are described in the application in some detail, for example at page 6, line 25 to page 7, line 20.

Accordingly, Applicants respectfully submit that the Office Action has failed to establish the *prima facie* obviousness of the claimed invention. Reconsideration and withdrawal of the rejection under Section 103 is therefore requested respectfully.

### **CONCLUSION**

The foregoing represents a *bona fide* attempt to resolve all pending issues raised in the Office Action dated December 28, 2006. There being no remaining issues, Applicants submit that the application is now in condition for allowance. Accordingly, a Notice of Allowability for all of pending claims 13, 14 and 26 to 36 is earnestly solicited.

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/S. Maurice Valla/  
S. Maurice Valla  
Registration No. 43,966

Woodcock Washburn LLP  
Cira Centre  
2929 Arch Street, 12th Floor  
Philadelphia, PA 19104-2891  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439